



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,663	11/04/2003	Yu-Jen Su	TAIW 185	6477

7590 04/22/2005

RABIN & CHAMPAGNE, P.C.  
Suite 500  
1101 14 Street, N.W.  
Washington, DC 20005

EXAMINER
----------

MORRISON, THOMAS A

ART UNIT	PAPER NUMBER
----------	--------------

3653

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/699,663

Applicant(s)

SU, YU-JEN

Examiner

Thomas A. Morrison

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-20 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/04/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations in claims 3 and 20 must be shown or the feature(s) canceled from the claim(s). More specifically, the drawings must show the **idler gear engaged** with the **driver gear** as set forth in independent claims 1 and 18, and, at the same time, also show the **intergear** which **engages** respectively with the **idler gear and the driver gear** as set forth in claims 3 and 20. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because (1) the numeral 440 which indicates the direction of paper feeding is not included on the drawings; and (2) the numeral 430 which indicates the paper is not included on the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3-4 and 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 3-4 and 20, the limitations in claims 3 and 20, and their dependent claims are confusing. Independent claims 1 and 18 recite that the **idler gear** is **engaged** with the **driver gear** and that the **pickup gear** is located on the swing end of the swing arm **to engage** with the **idler gear**. In contrast, dependent claims 3 and 20 recite that the idler gear and the driver gear are **interposed by an intergear** which **engages** respectively with the **idler gear and the driver gear**. How does the driver gear engage with the idler gear and also engage with the intergear?

Claim 19 recites the limitation "the spindle" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 8, 11-14 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Publication No. 3-267228. In particular, Japanese Publication No. 3-267228 discloses all of the limitations of claims 1, 2, 8, 11-14 and 17-18.

Regarding claim 1, Figs. 3-4 show a paper pickup mechanism (including 38) located on one side of a feeding paper tray (21), including a driver gear (44) for receiving rotational power transmitted from a driving power source having a pivoted axle (43); an idler gear (45) engaged with the driver gear (44) having a rotation axis connecting to the rotation axis (43) of the driver gear (44) through a first linkage bar (near 49); a swing arm (50) having a pivoted end and a swing end, the swing arm (50) being rotatable around the pivoted end (near 51); a pickup gear (47) located on the swing end of the swing arm (50) to engage with the idler gear (45) when the idler gear (45) is driven by the driver gear (44); and a pickup roller (38) being coaxial with the pickup gear (47) and driven by the driver gear (47) to rotate in paper feeding direction to generate a torque to exert a force on a paper located on the top of the feeding paper tray (21).

Regarding claim 2, Fig. 3 shows that the driver gear (44) is located between the pickup roller (38) and the driving power source (near 42).

Regarding claim 8, Figs. 4 and 10 show that the driver gear (44) is located on an inner side of the feeding paper tray (21).

Regarding claim 11, Fig. 4 shows that the pivoted end of the swing arm (50) has a hollow connecting strut.

Regarding claim 12, Fig. 3 shows that the pivoted end of the swing arm (50) is pivoted to an axle rod (43) extending from an inner wall of the feeding paper tray.

Regarding claim 13, Fig. 4 shows that the swing end of the swing arm (50) is extended to form a first connection plate (near 47) and a second connection plate (50).

Regarding claim 14, Fig. 4 shows that the pickup gear (47) is located on an outer side of the first connection plate (near 47).

Regarding claim 17, Fig. 4 shows that the feeding paper tray (21) is a horizontal paper tray.

Regarding claim 18, Figs. 3-4 show a paper pickup mechanism (including 38) located on one side of a feeding paper tray, with

a driver gear (44) for receiving rotational power transmitted from a driving power source having a pivoted axle;

an idler gear (45) engaged with the driver gear (44) having a rotation axis connecting to the rotation axis of the driver gear (44) through a first linkage bar (near 49);

a swing arm (50) having a pivoted end and a swing end, the swing arm (50) being rotatable around the pivoted end;

a pickup gear (47) located on swing end of the swing arm (50) to engage with the idler gear (45) when the idler gear (45) is driven by the driver gear (44); and

a pickup roller (38) being coaxial with the pickup gear (47) and driven by the driver gear (44) to rotate in paper feeding direction to generate a torque to exert a force on a paper located on the top of the feeding paper tray (21);

wherein the driver gear (44) is located between the pickup roller (38) and the driving power source (near 42).

5. Claims 1, 2, 8-11 and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,648,322 (Park). In particular, the Park patent discloses all of the limitations of claims 1, 2, 8-11 and 17-18.

Regarding claim 1, Figs. 5-6 show a paper pickup mechanism (including 47) located on one side of a feeding paper tray (23), including

a driver gear (45a) for receiving rotational power transmitted from a driving power source having a pivoted axle (41);

an idler gear (45b) engaged with the driver gear (45a) having a rotation axis connecting to the rotation axis (44) of the driver gear (45a) through a first linkage bar (near 46);

a swing arm (49) having a pivoted end and a swing end, the swing arm (49) being rotatable around the pivoted end (near 50);

a pickup gear (45c) located on the swing end of the swing arm (49) to engage with the idler gear (45b) when the idler gear (45b) is driven by the driver gear (45a); and



a pickup roller (47) being coaxial with the pickup gear (45c) and driven by the driver gear (45a) to rotate in paper feeding direction to generate a torque to exert a force on a paper located on the top of the feeding paper tray (23).

Regarding claim 2, Figs. 5-6 show that the driver gear (45a) is located between the pickup roller (47) and the driving power source (near 41).

Regarding claim 8, Figs. 5-6 show that the driver gear (45a) is located on an inner side of the feeding paper tray (23).

Regarding claim 9, Figs. 5-6 show that the driver gear (45a) is mounted on an axle strut (42) located on an inner side of the feeding paper tray (23). In particular, the strut (42) extends into the tray (23).

Regarding claim 10, Figs. 5-6 show that the driver gear (45a) is engaged with a gear set (including 43a-c) located on an outer side of the feeding paper tray (above tray 23), the gear set (including 43a-c) transmitting the rotational power from the driving power source to the driver gear (45a).

Regarding claim 11, Figs. 5-6 show that the pivoted end of the swing arm (49) has a hollow connecting strut.

Regarding claim 17, Figs. 5-6 show that the feeding paper tray (23) is a horizontal paper tray.

Regarding claim 18, Figs. 5-6 show a paper pickup mechanism (including 47) located on one side of a feeding paper tray (23), with

a driver gear (45a) for receiving rotational power transmitted from a driving power source having a pivoted axle;

an idler gear (45b) engaged with the driver gear (45a) having a rotation axis connecting to the rotation axis of the driver gear (45a) through a first linkage bar (near 46);

a swing arm (49) having a pivoted end and a swing end, the swing arm (49) being rotatable around the pivoted end;

a pickup gear (45c) located on swing end of the swing arm (49) to engage with the idler gear (45b) when the idler gear (45b) is driven by the driver gear (45a); and

a pickup roller (47) being coaxial with the pickup gear (45c) and driven by the driver gear (45a) to rotate in paper feeding direction to generate a torque to exert a force on a paper located on the top of the feeding paper tray (23);

wherein the driver gear (45a) is located between the pickup roller (47) and the driving power source (near 41).

6. Claims 1, 2, 13, 15 and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2004/0007807 (Fujiwara). In particular, the Fujiwara patent publication discloses all of the limitations of claims 1, 2, 13, 15 and 17-18.

Regarding claim 1, Figs. 2-3 show a paper pickup mechanism (including 21) located on one side of a feeding paper tray (17), including

a driver gear (27) for receiving rotational power transmitted from a driving power source having a pivoted axle;

an idler gear (29) engaged with the driver gear (27) having a rotation axis connecting to the rotation axis (near 22) of the driver gear (27) through a first linkage bar (25);

a swing arm (including 30) having a pivoted end and a swing end, the swing arm (including 30) being rotatable around the pivoted end (near 32);

a pickup gear (28) located on the swing end of the swing arm (including 30) to engage with the idler gear (29) when the idler gear (29) is driven by the driver gear (27); and

a pickup roller (21) being coaxial with the pickup gear (28) and driven by the driver gear (27) to rotate in paper feeding direction to generate a torque to exert a force on a paper located on the top of the feeding paper tray (17).

Regarding claim 2, Figs. 2-3 show that the driver gear (27) is located between the pickup roller (21) and the driving power source (near numeral 42a).

Regarding claim 13, Figs. 2-3 show that the swing end of the swing arm (including 30) is extended to form a first connection plate (30) and a second connection plate (30 on side near 42b).

Regarding claim 15, Figs. 2-3 show that the pickup roller (21) is located between the first connection plate (30) and the second connection plate (30 on side near 42b).

Regarding claim 17, Figs. 2-3 show that the feeding paper tray (17) is a horizontal paper tray.

Regarding claim 18, Figs. 2-3 show a paper pickup mechanism (including 21) located on one side of a feeding paper tray (17), with

a driver gear (27) for receiving rotational power transmitted from a driving power source having a pivoted axle;

an idler gear (29) engaged with the driver gear (27) having a rotation axis connecting to the rotation axis of the driver gear (27) through a first linkage bar (25);

a swing arm (including 30) having a pivoted end and a swing end, the swing arm (including 30) being rotatable around the pivoted end;

a pickup gear (28) located on swing end of the swing arm (including 30) to engage with the idler gear (29) when the idler gear (29) is driven by the driver gear (27);  
and

a pickup roller (21) being coaxial with the pickup gear (28) and driven by the driver gear (27) to rotate in paper feeding direction to generate a torque to exert a force on a paper located on the top of the feeding paper tray (17);

wherein the driver gear (27) is located between the pickup roller (21) and the driving power source (near 42a).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park as applied to claim 1 above, and further in view of U.S. Patent No. 5,547,181 (Underwood). The Park patent discloses all of the limitations of claim 16, except for the upright paper tray.

The Underwood patent shows that it is well known to provide a media sheet pick and feed system with an upright paper tray (including 52), e.g., so that the feed system takes up less floor space than a feed system with a horizontal tray. It would have been obvious to one of ordinary skill in the art at the time of the invention, to provide the Park patent with an upright tray, to save space.

***Allowable Subject Matter***

8. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

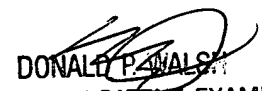
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,311,973 discloses that it is well known to provide paper trays in a sheet feeding system that are arranged to save floor space.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is 571-272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on 571-272-6944. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
DONALD P. WALSH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600